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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/532,747	04/26/2005	Hiroji Fukui	Q87312	9310
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EXAMINER				
JOY, DAVID J				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/532,747

**Applicant(s)**

FUKUI ET AL.

**Examiner**

David J. Joy

**Art Unit**

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-36 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Election/Restrictions*

1. Restriction is required under 35 U.S.C. 121 and 372.
2. This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted:
  - Group I, Claims 1-31 and 36, drawn to a heat-decaying material;
  - Group II, Claim 32, drawn to a method for producing a porous material;
  - Group III, Claim 33, drawn to a transfer sheet;
  - Group IV, Claim 34, drawn to a patterning method involving selectively applying thermal energy;
  - Group V, Claim 35, drawn to a patterning method involving transferring a pattern formed in a photomask.
3. The inventions listed as Groups I, II, III, IV and V do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the

same or corresponding special technical features for the following reasons: Group I relates to a heat-decaying material, while Groups II through V relate to different inventive concepts, given that they are directed to methods. In particular, the method of Group II involves the preparation of a precursor, which is a concept that is not shared with any of the other groups. In Group III, the method recites the adhering of a transfer object, which is a concept that does not appear in any of the other groups. As for Group IV, the method provides a step of selectively applying thermal energy, which is not shared with any of the other groups. Finally, regarding Group V, the method requires a step of transferring a pattern formed in a photomask, which is a concept that is not shared with any of the other groups.

4. This application contains claims directed to the following species for Group I, a heat-decaying material. In the event that the invention of Group I is elected, then the following species and subspecies of the generic invention must also be elected accordingly. These species and their respective subspecies are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1. The species are as follows:

A. The application contains claims directed to the following species for **the**

**decomposition promoter:**

- (1) the heat-decaying material having NO decomposition promoter (i.e., no species claimed);
- (2) the heat-decaying material having peroxide as a decomposition promoter (Claims 5 & 6);
- (3) the heat-decaying material having an azo compound as a decomposition promoter (Claims 5 & 7);
- (4) the heat-decaying material having tin oxide as a decomposition promoter (Claims 5 & 8).

**B. The application contains claims directed to the following species for the environment in which the heat-decaying material decays:**

- (1) when heated in an oxygen-containing atmosphere at a predetermined temperature falling between 150 and 350 °C (Claim 11);
- (2) when heated in an anaerobic atmosphere at a predetermined temperature falling between 150 and 350 °C (Claim 12);
- (3) when heated under reduced pressure within 5 minutes at a predetermined temperature falling between 150 and 350 °C (Claim 13).

C. The application contains claims directed to the following species for **the particular nature of the polyoxyalkylene resin**:

- (1) the polyoxyalkylene resin is not crosslinked / uncrosslinked  
(Claims 15 and 18);
- (2) the polyoxyalkylene resin is crosslinked / contains a crosslinkable functional group-having polymer (Claims 16, 17, 20, 21 & 25).

C1. If the species C(2) is elected above, then the application contains claims directed to the following subspecies for **the viscosity of the heat-decaying material**:

- (a) a viscosity at 20°C of from 1 to 100 mPa·s (Claim 22);
- (b) a viscosity at 20°C of from 500 to 100,000 mPa·s (Claim 23);
- (c) a viscosity at 20°C of from 20 to 1000 mPa·s (Claim 24).

C2. If the species C(2) is elected above, then the application contains claims directed to the following subspecies for **the temperature atmosphere in which the cured product of the material decays**:

- (a) in a temperature atmosphere falling between 150 and 220 °C  
(Claim 29);

- (b) in a temperature atmosphere falling between 220 and 280 °C  
(Claim 30);
- (c) in a temperature atmosphere falling between 280 and 350 °C  
(Claim 31).

D. The application contains claims directed to the following species for **the temperature atmosphere in which the heat-decaying material decays:**

- (1) in a temperature atmosphere falling between 150 and 220 °C  
(Claim 26);
- (2) in a temperature atmosphere falling between 220 and 280 °C  
(Claim 27);
- (3) in a temperature atmosphere falling between 280 and 350 °C  
(Claim 28).

5. Applicant is required, in reply to this action, to elect a single species for each of the elections of species outlines above, to which the claims shall be restricted if no generic claim is finally held to be allowable. The reply must also identify the claims readable on each elected species, including any claims subsequently added. An

argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

6. Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

7. The following claim(s) are generic: Claims 1-4, 9, 10, 14 and 19.

8. The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons: the species (and applicable subspecies) outlined above supply different characteristics, reactions, qualitative differences and quantitative differences that are not shared by all of the claims of the invention claimed in Group I.



9. In light of the complexity of the restriction requirement for this application, no telephone call regarding the restriction and possible elections of species has been made. See MPEP §812.01.

10. Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

11. The election of an invention or species may be made with or without traverse. To preserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

12. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

13. The examiner has required restriction between product and process claims.

Where applicant elects claims directed to the product, and the product claims are subsequently found allowable, withdrawn process claims that depend from or otherwise require all the limitations of the allowable product claim will be considered for rejoinder. All claims directed to a nonelected process invention must require all the limitations of an allowable product claim for that process invention to be rejoined.

14. In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103 and 112. Until all claims to the elected product are found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowable product claim will not be rejoined. See MPEP § 821.04(b). Additionally, in order to retain the right to rejoinder in accordance with the above policy, applicant is advised that the process claims should be amended during prosecution to require the limitations of the product claims. **Failure to do so**

**may result in a loss of the right to rejoinder.** Further, note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

### *Conclusion*

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David J. Joy whose telephone number is (571)272-9056. The examiner can normally be reached on Monday - Friday, 7:00 AM - 3:30 PM EST.

16. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie E. Shosho can be reached on (571) 272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

17. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic

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Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DJJ/

Examiner, Art Unit 1794

06/11/2008

/Callie E. Shosho/

Supervisory Patent Examiner, Art Unit 1794